BANK REGULATION AND FINANCIAL STABILITY

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Christina Bui declare that this thesis, is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy, in the Finance Discipline Group at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise reference or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution. This research is supported by an Australian Government Research Training Program Scholarship.

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LIST OF ABBREVIATIONS

2SLS	Two Stage Least Square
ADI	Australian Deposit-taking Institution
AMLF	Asset-backed commercial paper Money Market Mutual Fund Liquidity Facility
APRA	Australian Prudential Regulation Authority
BCBS	Basel Committee on Banking Supervision
BHC	Bank Holding Company
BIS	Bank for International Settlements
C&I (loans)	Commercial and Industrial (loans)
CAPM	Capital Asset Pricing Model
CoVaR	Conditional Value-at-Risk
CPFF	Commercial Paper Funding Facility
CPP	Capital Purchase Program
CRSP	Center for Research in Security Prices
CVaR	Unconditional Expected Shortfall
DID	Difference-in-differences
D-SIB	Domestic Systemically Important Bank
DW	Discount Window
FDIC	Federal Deposit Insurance Corporation
Fed	US Federal Reserve
FSB	Financial Stability Board
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GMM	Generalised Method of Moments
G-SIB	Globally Systemically Important Bank
IFRS	International Financial Reporting Standards
IRB	Internal-based Rating Bank
IV	Instrumental Variable
MMMF	Money Market Mutual Fund
OLS	Ordinary Least Square
PDCF	Primary Dealer Credit Facility
SEC	Securities Exchange Commission
SES	Systemic Expected Shortfall
SOMA	System Open Market Account
STOMO	Single-Tranche Open Market Operations
TAF	Term Auction Facility
TARP	Trouble Asset Relief Program
TSLF	Term Securities Lending Facility
US	United States
VaR	Value-at-Risk

PREFACE

The thesis contains three empirical studies, which have been presented as joint work. A version of chapter 2 was published in the Journal of Financial Stability (volume 33), as a journal article co-authored with Associate Professor. Harald Scheule and Associate Professor. Eliza Wu. It was presented at various conferences and seminars, including the University of Technology Sydney (UTS), Massey University, the 7th Financial Markets and Corporate Governance Conference, the Paul Wooley Centre for Financial Market Dysfunctionality Workshop, the UTS PhD Symposium, the CIFR Banking Research Symposium, and the IGF/ADB Financial Cycles, Systemic Risk, Interconnectedness, and Policy Options for Resilience Conference 2016.

Chapter 3 is a working paper, co-authored with Associate Professor Harald Scheule and Associate Professor Eliza Wu. The paper was presented at the 6th Financial Markets and Corporate Governance Conference, UTS research symposium, 28th Australasian Finance and Banking Conference, 5th Auckland Finance Meeting, University of Sydney-FIRN Banking PhD workshop, the 2016 International Finance and Banking Society Conference in Barcelona, 2017 FIRN (Financial Research Network) Conference, and the 30th Australasian Finance and Banking Conference.

Chapter 4 is a working paper, co-authored with Professor Talis Putnins. The paper is part of a research project that was supported by the 2017 APRA Brian Gray Scholarship, which was jointly funded by the Australian Prudential Regulation Authority (APRA) and the Reserve Bank of Australia. It was presented at the UTS research symposium and will be presented at the Brian Gray presentation held at the APRA head office.

ABSTRACT

Financial stability is one of the main objectives of bank regulations globally. Over the past decades, several rules and policy measures have been implemented to mitigate the propagation of risks in the financial system. However, these regulations can have a multitude of effects at the bank and system-wide levels. The aim of this thesis is to enhance our understanding of bank regulations and their implications on the financial system. The thesis makes substantial contributions to the literature by providing new findings on the desirable and undesirable effects of recent regulations in Australia and the US in three separate studies.

Using a simulation technique, the first study quantifies the size of capital buffers required to reduce system-wide losses of Australian banks. The results suggest that a moderate increase in bank capital buffers is sufficient to maintain financial system resilience, even after taking economic downturns into consideration. Furthermore, while banks benefit from paying a lower cost of debt when they have a higher capital buffer, lending volumes are lower indicating that credit supply may be hampered if bank capital levels are too high within a financial system.

The second study presents a comprehensive assessment of the impacts of the Federal Reserve crisis liquidity programs using US bank holding company data. The main finding is that the liquidity programs were ex-ante efficient as they targeted illiquid banks with low core stable funding sources, and participants experienced an increase in liquidity creation and loan growth. However, there was a pervasive shift in bank risk taking that increased their stock return synchronicity following liquidity support. Most importantly, while there is strong evidence of an increase in loan supply by banks that accessed the programs that supported short-term funding, these banks are subject to greater stigma effect, and thus pose higher crash risk relative to other banks.

The third study examines the effect of banning proprietary trading by banks (the Volcker Rule) on financial stability. There are three channels through which the Volcker Rule impacts bank-level and systemic risks: revenue diversification, bank similarity, and proprietary trading activity. While the reduction in proprietary trading lowers the directly targeted banks' systemic risk, an unintended consequence is that greater similarity between banks increases the risk that they default at the same time and thus raises the probability of a systemic default. Banks that were not engaged in proprietary trading are also affected by the Volcker Rule through this similarity channel.